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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/936,510	09/24/1997	YONG BEOM KIM	8733.20056	9825
30827	7590	04/05/2005	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			CHOWDHURY, TARIFUR RASHID	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	

2871

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/936,510

Applicant(s)

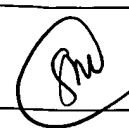
KIM, YONG BEOM

Examiner

Tarifur R. Chowdhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,14,16,20,21 and 40-53 is/are pending in the application.
- 4a) Of the above claim(s) 46-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,14,16,20,21 and 40-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 1997 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 46-53 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Species I: the specifics being the two uniaxial optical compensation films being of a same type and having same ordinary refractive index (claims 1,4,14,16,20,21, and 40-45);

Species II: the specifics being the two uniaxial optical compensation films have a phase difference of 30-40 nm between them and a difference in anisotropic refractive indices of an optical compensation film being 0.005-0.006 (claims 46-53).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 46-53 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 14, 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka et al., (Akatsuka), USPAT 5,406,396.

4. Akatsuka discloses (col. 2, lines 33-39; and shows in Fig. 3, a liquid crystal display device, comprising:

- first and second substrates (not shown);
- an electrode over the first substrate (not shown);
- a liquid crystal layer disposed interjacent the first and second substrates;
- two uniaxial optical compensation films (24A, 24B) of a same type and shape over the second substrate, wherein an ordinary refractive index of each of the two uniaxial optical compensation films is the same (col. 25, lines 50-55; Table 6, Example 22-26); and
- a first alignment layer over the first substrate (not shown);

Akatsuka also discloses (col. 32, lines 24-25) that the liquid crystal display device is applicable to a transmitting type or a reflecting type display.

Akatsuka differs from the claimed invention because he does not explicitly disclose that the electrode is reflective and made of an opaque metal. However, using a reflective electrode made of an opaque metal is common and known in the art and thus would have been obvious to obtain a reflective display.

Accordingly, claims 1 and 40 would have been obvious.

As to claims 14 and 42, since the method of manufacturing the device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would at least been obvious to the device.

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5. Claims 4, 16, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka as applied to claims 1, 14, 40 and 42 above and in view of Arakawa, USPAT 5,189,538.

6. Akatsuka differs from the claimed invention because he does not explicitly disclose that the compensation films are positive-type.

Arakawa discloses a liquid crystal display device having compensation films.

Arakawa further discloses that by utilizing uniaxial compensation films of positive-type in a liquid crystal display, it is possible to widen the viewing angle (col. 3, lines 54-55; col. 4, lines 23-27).

Arakawa is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use uniaxial compensation films of positive-type.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Akatsuka by employing positive-type uniaxial compensation films for advantages such as widened viewing angle, as per the teachings of Arakawa.

Accordingly, claims 4, 16, 41 and 43 would have been obvious.

7. Claims 20, 21, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuka as applied to claims 1, 14, 40 and 42 above and in view of Sugiyama et al., (Sugiyama), USPAT 5,757,455.

8. Akatsuka differs from the claimed invention because he does not explicitly disclose that the alignment layer having a plurality of alignment direction over the first substrate.

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Sugiyama discloses a liquid crystal display device having good visual angle characteristics including a first alignment film with a plurality of first alignment direction, where at least two of the plurality of first alignment directions is either perpendicular or parallel to one another (Fig. 6G), formed on the first substrate (col. 1, lines 63-64; col. 2, lines 5-13). Sugiyama further discloses that the method of manufacturing such a device includes a method of forming the alignment layer by either rubbing or exposing number of times in accordance with the number of alignment directions to polarize ultraviolet rays to form the alignment directions (col. 4, lines 28-49; col. 5, lines 26-28).

Sugiyama is evidence that ordinary workers in the art would find a reason, suggestion or motivation to form alignment layer having plurality of alignment direction by either rubbing or exposing the alignment layer to ultraviolet light.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Akatsuka by forming alignment layers having plurality of alignment direction by either rubbing or exposing the layer to ultraviolet light in order to obtain good visual angle characteristics.

Accordingly, claims 20, 21, 44 and 45 would have been obvious.

Response to Arguments

9. Applicant's arguments, see pages 8-13 of the remarks, filed on 01/14/05, with respect to the rejection(s) of claim(s) 1, 14, 40 and 42 under 35 U.S.C. 102(e) and claims 4, 16, 20, 21, 43-45 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further

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consideration, a new ground(s) of rejection is made in view of the newly found reference (USPAT 5,406,396).

Since applicant has not amended the claims, the instant office action is made non-final.

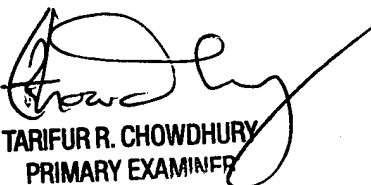
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
April 01, 2005


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER